PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	:	
Takayoshi OYAMADA, et al.	:	Group Art Unit: 1752
Appln. No.: 10/025,455	:	Examiner: CHEA, THORL
Filed: December 26, 2001	:	

For: HEAT-DEVELOPABLE IMAGE RECORDING MATERIAL

DECLARATION UNDER 37 C.F.R. §1.132

Assistant Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

I, Takayoshi Oyamada, do declare and state as follows:

I am a citizen of Japan.

I graduated from Science University of Tokyo and received a Master's Degree in the course of Science in March, 1993.

Since April 1993 I have been employed by Fuji Photo Film Co., Ltd. and have been engaged in research and development of emulsions at the Ashigara Laboratories of said company.

I am familiar with the subject matter disclosed by said application as well as the Office Action dated July 2, 2003 concerning said application.

In order to demonstrate the unexpected superiority of the present invention, the following experimentation was conducted by me or under my supervision.

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EXPERIMENTATION

Organic silver salt dispersions P to R were prepared in the same manner as the organic silver salt dispersions A to G in Example 1 of the present specification; organic silver salt dispersions S and T were prepared in the same manner as the organic silver salt dispersions H and K in Example 1 of the present specification; and organic silver salt dispersions U and V were prepared in the same manner as organic silver salt dispersions L to O in Example 1 of the present specification. The organic silver salt gains contained in the thus-obtained organic silver salt dispersions P to V had a volume weighed average diameter (equivalent-sphere diameter), a coefficient of variation in the volume weighed average diameter, a ratio (length/width ratio) of long side c to short side b of a grain, and an aspect ratio shown in Table 1A.

TABLE 1A

Organic Silver Salt Dispersion	Content (mol%)			Reaction Temperature (°C)	Volume Weighed Average diameter (μm)	Coefficient of Variation (%)	Length/Width Ratio	Aspect Ratio
	Silver Stearate	Silver Arachidate	Silver Behenate					
P	0.5	1.5	98	30	0.4	11	1	12
Q	1	1	98	30	0.41	12	1	13
R	2	0	98	30	0.41	12	1.1	15
S	0.5	1.5	98	30	0.4	11	1	12
T	2	0	98	30	0.41	12	1.1	15
U	0.5	1.5	98	30	0.4	11	1	12
V	2	0	98	30	0.41	12	1.1	15

Each of Heat-developable Photosensitive Materials 1P to 1V was manufactured and was evaluated in the photographic performance in the same manner as in Example 1 of the present specification. The results are shown in Table 2A.

TABLE 2A

Heat-developable Photosensitive Material	Dmin (1D as 100)	Change in Percentage of Image Preservability (%)	Remarks
1P	100	13	Invention
1Q	103	25	Invention
1R	105	41	Comparison
1S	100	15	Invention
1T	106	49	Comparison
1U	100	14	Invention
1V	104	45	Comparison

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From the results shown above, when the stearic acid content exceeds 1%, the change percentage of image preservability becomes drastically large, becoming a problematic level for practical application. This fact is understood to have a mechanism of image preservability deterioration caused by a dissolved product due to the stearic acid present in the layer after thermal development when the content of stearic acid exceeds 1%. The fact that the stearic acid content contributes so much to the image preservability of heat-developable photosensitive materials has not been known as yet, and is a surprising new knowledge in the art.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectively submitted,

Date: October 28, 2003

Takayoshi Oyamada

Takayoshi Oyamada